

1    **CLAIMS**

2    What is claimed is:

3    1. An information processing apparatus for creating a  
4    digest of a document a layout of which is determined, the  
5    document including a plurality of regions, each region  
6    including one or more display elements, the apparatus  
7    comprising:

8        means for selecting the display elements based on  
9    display priorities of the display elements, and for decid-  
10   ing all of selected display elements as a display content  
11   of a digest screen under a condition where a total display  
12   area of all of the selected display elements does not  
13   exceed a required display area; and

14       means for setting a merging relationship among the  
15   regions by deciding a merging region, with which a region  
16   not being displayed on the digest screen is merged, from  
17   among regions displayed on the digest screen based on  
18   layout information for the regions in the document, all of  
19   the regions being included in the document.

20   2. The information processing apparatus according to claim  
21   1, further comprising means for deciding, as a display  
22   content of a detail screen, a region group including the  
23   regions displayed on the digest screen and the region  
24   merged with the displayed regions in response to that a  
25   detail display of the displayed regions is required.

26   3. The information processing apparatus according to claim  
27   2, further comprising means for creating control informa-  
28   tion for controlling a display of the detail screen,  
29   wherein the means for deciding the display content of the

1 detail screen creates a digest of the detail screen based  
2 on the control information when the region group is too  
3 large to fit in the required display area.

4 4. The information processing apparatus according to claim  
5 1, wherein the means for deciding the display content of  
6 the digest screen further includes means for changing the  
7 display content of the digest screen based on an operation  
8 of a user.

9 5. The information processing apparatus according to claim  
10 4, wherein the changing means includes means for automati-  
11 cally changing the display content of the digest screen,  
12 accompanying the operation of the user.

13 6. A server for creating a digest of a document a layout of  
14 which is determined, the server transmitting information  
15 for creating the digest of the document the layout of which  
16 is determined to a client terminal together with the  
17 document, the server comprising:

18 means for obtaining display priorities of a plurality  
19 of display elements belonging to each of regions of the  
20 document based on attributes of the display elements; and  
21 means for creating layout information for the regions  
22 in the document.

23 7. The server according to claim 6,  
24 wherein the means for obtaining the display priori-  
25 ties further includes:  
26 means for arraying, for each of the regions, the  
27 display elements belonging to the regions in accordance  
28 with a predetermined criterion;  
29 means for obtaining a ratio of a cumulative length of  
30 each of the arrayed display elements in each of the regions

1 by dividing the cumulative length by a total length of the  
2 region; and  
3 means for dividing the ratio of the cumulative length  
4 by a significance of the region to which the display  
5 element belongs, the ratio having been obtained for each of  
6 the display elements.

7 8. A method comprising creating a digest of a document a  
8 layout of which is determined, the document including a  
9 plurality of regions, each region including one or more  
10 display elements, the step of creating comprising the steps  
11 of:

12 selecting the display elements based on display  
13 priorities of the display elements, and for deciding all of  
14 selected display elements as a display content of a digest  
15 screen under a condition where a total display area of all  
16 of the selected display elements does not exceed a required  
17 display area; and

18 setting a merging relationship among the regions by  
19 deciding a merging region, with which a region not being  
20 displayed on the digest screen is merged, from among  
21 regions displayed on the digest screen based on layout  
22 information for the regions in the document, all of the  
23 regions being included in the document.

24 9. The method according to claim 8, further comprising the  
25 step of deciding, as a display content of a detail screen,  
26 a region group including the regions displayed on the  
27 digest screen and the region merged with the displayed  
28 regions in response to that a detail display of the  
29 displayed regions is required.

30 10. The method according to claim 9, further comprising the  
31 steps of: creating control information for controlling a

1 display of the detail screen; and creating a digest of the  
2 detail screen based on the control information when the  
3 region group is too large to fit in the required display  
4 area.

5 11. The method according to claim 8, further comprising the  
6 step of changing the display content of the digest screen  
7 based on an operation of a user.

8 12. A program for creating a digest of a document a layout  
9 of which is determined, the document including a plurality  
10 of regions, each region including one or more display  
11 elements, the program allowing a computer to realize:

12 a function to select the display elements based on  
13 display priorities of the display elements, and to decide  
14 all of selected display elements as a display content of a  
15 digest screen under a condition where a total display area  
16 of all of the selected display elements does not exceed a  
17 required display area; and

18 a function to set a merging relationship among the  
19 regions by deciding a merging region, with which a region  
20 not being displayed on the digest screen is merged, from  
21 among regions displayed on the digest screen based on  
22 layout information for the regions in the document, all of  
23 the regions being included in the document.

24 13. The program according to claim 12, wherein the program  
25 further allows the computer to realize a function to  
26 decide, as a display content of a detail screen, a region  
27 group including the regions displayed on the digest screen  
28 and the region merged with the displayed regions in  
29 response to that a detail display of the displayed regions  
30 is required.

1 14. The program according to claim 13, wherein the program  
2 further allows the computer to realize: a function to  
3 create control information for controlling a display of the  
4 detail screen; and a function to create a digest of the  
5 detail screen based on the control information when the  
6 region group is too large to fit in the required display  
7 area.

8 15. The program according to claim 12, wherein the program  
9 further allows the computer to realize a function to change  
10 the display content of the digest screen based on an opera-  
11 tion of a user.

12 16. A computer program product comprising a computer  
13 usable medium having computer readable program code means  
14 embodied therein for causing creation of a digest of a  
15 document a layout of which is determined, the computer  
16 readable program code means in said computer program  
17 product comprising computer readable program code means for  
18 causing a computer to effect the functions of claim 1.

19 17. A computer program product comprising a computer  
20 usable medium having computer readable program code means  
21 embodied therein for causing creation of a digest of a  
22 document a layout of which is determined, the computer  
23 readable program code means in said computer program  
24 product comprising computer readable program code means for  
25 causing a computer to effect the functions of claim 6.

26 18. An article of manufacture comprising a computer usable  
27 medium having computer readable program code means embodied  
28 therein for causing creation of a digest of a document a  
29 layout of which is determined, the computer readable  
30 program code means in said article of manufacture

1 comprising computer readable program code means for causing  
2 a computer to effect the steps of claim 8.

3 19. A program storage device readable by machine, tangibly  
4 embodying a program of instructions executable by the  
5 machine to perform method steps for creating a digest of a  
6 document a layout of which is determined, said method steps  
7 comprising the steps of claim 8.